



# Environmental Monitoring Plan

# **Draft Environmental Monitoring Plan**

## **Ripley-Westfield Wind LLC**

**Towns of Ripley and Westfield, Chautauqua County, New York**

**September 2009**

## Table of Contents

1.0	Introduction .....	1-1
1.1	Project Description.....	1-1
1.2	Environmental Monitoring Plan Purpose.....	1-2
2.0	Organization and Reporting .....	2-1
2.1	Reporting Structure.....	2-1
2.2	Authority and Responsibilities of the Environmental Monitor.....	2-1
2.3	Contact Lists .....	2-2
3.0	Environmental Monitoring Program.....	3-1
3.1	General Activities .....	3-1
3.2	Daily Activities .....	3-2
3.3	Incident Investigation.....	3-2
4.0	Project Documentation.....	4-1
4.1	Daily Report.....	4-1
4.2	Monthly Report.....	4-1
4.3	Post Construction Report .....	4-1
5.0	Permit Conditions.....	5-1
5.1	USACE Permit Conditions .....	5-1

## Appendices

- A. USACE Jurisdictional Determination and Nationwide Permit Affirmation
- B. NYSDEC Permit and Supporting Documentation
- C. Co-Lead Agency Statement of Findings (for DEIS/FEIS/Other Environmental Commitments)
- D. Town Special Use Permit Conditions
- E. Wetland and Stream Location Maps
- F. NYSDAM Guidelines for the Construction of Wind Farms
- G. Plan for Unanticipated Discoveries
- H. Invasive Species Management Plan
- I. Spill Prevention and Response Plan

## **1.0 Introduction**

### **1.1 Project Description**

Ripley-Westfield Wind LLC (“Ripley-Westfield Wind”) proposes to construct an approximately 125-MW wind energy facility (Project) in the towns of Ripley and Westfield in Chautauqua County, located in western New York State.

The proposed Wind Farm includes construction of the following:

- Between 54 (Siemens 2.3-MW) and 61 (Repower 2.0-MW) turbines, depending on WTG size and model.
- Up to 7.6 miles of Project access roads in the town of Ripley and approximately 8.5 miles of Project access roads in the town of Westfield along corridors with gravel surfaces no more than 36 feet wide. These roads would allow vehicles to access each WTG site during construction of the Wind Farm. After construction, the same access roads would be reduced to no more than 20 feet wide (16-foot road with 2-foot shoulders on either side) to allow access for operation and maintenance. Access road construction will take place within a temporary ROW of 70 to 120 feet in upland areas. To minimize impacts to wetlands, the ROW width within a wetland will be reduced to approximately 65 feet;
- A buried electrical collection system (ECS), predominantly along Project Access Roads, that would interconnect each WTG to a Project substation;
- A substation with one or more transformers that would increase the voltage of the electricity generated by the Wind Farm to the voltage of the Niagara Mohawk transmission line located within the Project Area in the town of Ripley;
- An operation and maintenance building that will contain management offices and parking for Wind Farm personnel (approximately 2 acres total);
- A temporary construction laydown area for equipment and materials during the construction of the Wind Farm (approximately 16 acres total);
- A temporary off-site concrete batch plant in order to provide the concrete necessary for the construction of the turbine and substation foundations. The plant will be sited so as not to impact any wetlands or waterbodies; and
- A permanent meteorological tower that will be installed on the Project Site. The location of the meteorological tower will be selected after more wind data has been obtained and final Project layout is determined. The tower will consist of triangular lattice towers set in concrete bases with each side of the base approximately 10 feet long. The tower height will be 80 meters. The temporary towers currently in place will be removed after the permanent tower is installed and operational.

The preferred turbine model is a Siemens 2.3 MW, model SWT-2.3-101WTG. This WTG would consist of an enclosed monopole support tower, a nacelle at the top of each tower containing the electrical generating equipment and transformer, and a three-bladed rotor 101 meters (331 feet) in diameter and centered 80 meters (262.5 feet) above ground. The base of the tower is approximately 4.6 meters (17 feet) in diameter and the top is approximately 2.7 meters (9 feet) in diameter. The maximum height of the WTG is 130.5 meters (430 feet) when the rotor blade is at the top of its rotation. The WTG has an approximately 17-foot diameter, slightly exposed concrete foundation.

## **1.2 Environmental Monitoring Plan Purpose**

The purpose of the Environmental Monitoring Plan (The Plan) is to provide the environmental monitor(s) (EM) with a reference to aid in managing the environmental issues that may be encountered during construction of the Project. Potential environmental impacts may occur during construction/installation of roads, foundations, erosion control devices, electrical lines and equipment, and turbine equipment. This draft Plan contains the framework for the daily and long term monitoring and reporting structure to ensure that the Project is completed within the environmental parameters set forth in the permits issued for the Project. This draft Plan is intended to be a “living” document, which will evolve as the Project progresses and/or as unanticipated issues arise.

This Plan is organized into five sections:

- Section 2 describes the organization and supervision of personnel during construction, including reporting structure, authorities, and responsibilities.
- Section 3 discusses the EM’s role during construction.
- Section 4 provides the necessary information to ensure proper documentation of all activities and potential incidents.
- Section 5 contains a synopsis of the U.S. Army Corps of Engineers and New York State Department of Environmental Conservation’s permit conditions that apply to the construction phase of the Project.

In addition, appendices will contain copies of the permits with all conditions that have been issued for the Project and various documents that will assist the EM in their daily duties. These documents include specific plans created for the construction of the Project, wetland and stream mapping, and applicable agency guidelines. Documents such as the Storm Water Pollution Prevention Plan (SWPPP) are included by reference, but will not be attached to this Plan.

## **2.0 Organization and Reporting**

The following describes the reporting structure and authorities during the construction of the Project. A contact list also will be provided, to be used by the EM for reporting any incidents that may occur during construction of the Project.

### **2.1 Reporting Structure**

The EM manages the daily environmental issues associated with the construction of the Project including monitoring, documenting, and reporting functions. The Project's EM will have complete authority to order the correction of activities in violation of any permits or obligation; and to order the temporary cessation of work activities in violation of any permits or regulations until corrective measures have been implemented. The authority to order the temporary cessation of work is limited to the specific area in which a violation of any permit or regulation has occurred.

The EM also acts as independent oversight of Project construction activities. The EM will report to and coordinate all daily on-site activities with the Project's Site Manager.

### **2.2 Authority and Responsibilities of the Environmental Monitor**

The EM has the authority and responsibility to perform the following tasks:

- Ensure that all environmental permits have been received and that applicable agency notifications as required by all permits have been conducted prior to commencing work in a given area. This task will be coordinated with Ripley – Westfield Wind.
- Conduct pre-construction meetings and periodic site meetings with Contractors to review applicable permit conditions and requirements specific to the Contractor's scope of work.
- Conduct contractor "tailgate" sessions to review applicable permit conditions and potential problem areas for a given area of construction. These will occur on a regular basis, typically once a week.
- Monitor and document the contractors' adherence to all environmental specifications.
- Review the temporary and permanent stormwater and erosion controls for proper installation and maintenance in accordance with the Project SWPPP and record changes to the SWPPP necessitated by field conditions.
- Prepare and make available all required documentation including Daily Reports, Monthly Reports, and Non-Compliance Reports as necessary.
- Make required internal and agency notifications when non-compliance or any reportable violations occur.
- Stop work in any specific area or areas in which a contractor is conducting an activity in violation of the permits and regulations.

- Order remedial action for violations of environmental regulations.

The EM **does not** have the authority to:

- Change the requirements and specifications of the Project drawings after engineering and permit compliance review without approval from the Site Manager.
- Allow the contractor to change their scope of work. Changes to work scopes must be approved by the Site Manager or Project Manager after engineering and permit compliance review.
- Direct the contractor's work, as the contractor must preserve their independent contractor status.

### **2.3 Contact Lists**

This section will be updated prior to construction.

### **3.0 Environmental Monitoring Program**

The EM will be responsible for representing Ripley – Westfield Wind LLC and monitoring compliance with the environmental permits and regulations pertaining to the Ripley-Westfield Wind Project. The monitor will work under the supervision of the Site Manager, and will have peer status with the other QA/QC monitors on the Project site. For general noncompliance issues, the EM will work in conjunction with Ripley – Westfield Wind LLC and the construction personnel responsible for the areas where the non-compliance exists to resolve the issue and rectify any problems. For noncompliance situations where significant environmental damage is imminent, the EM will immediately order and document the cessation of the activity or rectification of the problem in the impacted area. The EM will contact the Site Manager and notify any requisite agencies.

#### **3.1 General Activities**

The EM will monitor contractor compliance with the Ripley-Westfield Wind Project's environmental plans and programs as well as all federal, state, and local permits and approvals. The EM has the ability to directly contact the applicable agencies representatives.

The EM will have the following responsibilities:

- Observe and document construction activities to monitor that work is completed in compliance with the environmental permit drawings and specifications issued for the Project. The EM will gather reports, photographs, and as-built information as needed to demonstrate compliance with permit requirements. The ability to order the cessation of work and rectification of violations in any impacted area will empower the monitor to ensure adherence to environmental permits and standards.
- Review the temporary and permanent stormwater and erosion controls for compliance with the Project SWPPP and record changes to the SWPPP necessitated by field conditions.
- Identify any areas where the stormwater and erosion controls are deficient or ineffective and require such deficiencies to be corrected as per specifications or regulations.
- Communicate with construction personnel and equipment operators to stay within designated construction areas and use only approved access roads.
- Monitor fuel handling and equipment maintenance operations so that these activities are performed away from wetlands and water bodies. Also, ensure that the contractor maintains the necessary spill response material as mandated by the SWPPP and Spill Prevention and Response Plan.
- Review with the contractor previously identified sensitive areas, such as wetlands, where special construction techniques will be required. Ensure that work in these areas is conducted in compliance with the drawings and specifications approved for these areas and in accordance with all federal, state, and local permit conditions.



- Monitor that work within agricultural fields is conducted in accordance with the guidance document issued by NYSDAM, to the extent practicable. This includes proper stockpiling of topsoil, segregation of subsoil and topsoil, and restoration methodologies. The guidance will be appended to this EMP closer to construction.
- Monitor that all environmental mitigation and restoration plans (i.e. stream and wetland crossings, seeding, erosion control, decompaction, etc.) are implemented in accordance with the Project’s drawings and specifications and in accordance with all federal, state, and local permit conditions.
- Prepare daily reports of inspection activities that document general compliance and noncompliance situations where remedial action is required.
- Prepare monthly and final reports, as required.

Applicable checklists and daily inspection logs will serve as a basis for the reporting structure.

### **3.2 Daily Activities**

The EM will conduct daily inspections of all areas of ongoing construction activities with an emphasis on those activities that are occurring within environmentally sensitive areas. The monitor will work with Ripley – Westfield Wind to establish daily inspection priorities, depending on the nature and location of ongoing activities and the sensitivity of a given area. In general, the schedule will include time in the morning to meet with construction staff and the Site Manager to obtain schedule updates and priorities as well as in-field monitoring activities; and time in the afternoon to complete and file monitoring reports. The EM will focus on activities such as initial grading activities in agricultural fields, crossings of wetlands or streams, and installation of SWPPP measures, among others. It is anticipated that several operations occurring throughout the Project Area will need to be spot-checked on a daily basis. For instance, clearing and grading activities may be prioritized over inspection of a less intensive activity.

### **3.3 Incident Investigation**

An environmental incident is defined as an unplanned event with the potential for undesirable environmental consequences. These incidents can range from a “near miss” to an accident. A near miss is an action that had the potential to create an environmental incident; however, no adverse effect occurred. The EM will document a near miss incident in the daily report, highlight it, and distributed the report to the Site Manager in order to ensure that the action does not occur in the future and result in an adverse affect on the environment. An accident is a situation where an action occurs that results in an actual adverse effect on the environment. In this instance, the EM will complete a noncompliance report.

The EM will verbally report all environmental incidents, including near misses, to the Site Manager as soon as practicable. In situations where immediate regulatory notifications are required, such as spills that exceed the reportable quantities limitations, the notification should be made by the EM. Where immediate notification is not required, notification may be made by the EM or Site Manager, if appropriate. These notifications may include spills that do not exceed the reportable quantity threshold or situations where damage occurs to wetlands or streams outside of the permitted areas. In these cases and where necessary, the appropriate

agencies will be notified by the EM or Site Manager so that the agencies have an opportunity to provide guidance toward remediation.

Incident investigation will involve determining, to the level of detail possible, the cause of the incident. A critical aspect of these investigations will be determining actions or policies that can be implemented to minimize the possibility of recurrence. If preventative actions are developed, they will be integrated by the EM into the tailgate meetings conducted with contractors; and noted on the EM's monitor's daily/monthly reports.

## **4.0 Project Documentation**

Detailed documentation is vital to ensuring compliance with regulatory requirements and standards associated with sensitive environmental issues and areas. Project documentation also simplifies the EM's responsibilities by providing a framework for addressing all potential implications of a construction project on the environment.

The Project's EM will be responsible for preparing and submitting several reports consisting of summaries of daily, monthly, and post construction activities. The EM may also be required to prepare periodic and/or final reports for submittal to local, state, or federal agencies, depending on permit conditions.

The reports generated by the Project's EM will be regularly submitted to the Towns of Ripley and Westfield during the project construction period.

### **4.1 Daily Report**

A major responsibility of the EM is accurate and detailed documentation of their daily inspection activities. The Project's EM will be required to maintain a logbook to record daily activities and to maintain a log of photographic documentation. The logbook will contain documentation of daily construction activities, weather conditions, construction progress, pertinent conversations, and compliance issues. The EM will summarize the information collected in the logbook into a daily report, which will serve as the permanent record of activities occurring on the site. In addition to the logbook, the EM may use several checklists or forms to provide a succinct reporting form for certain activities. These include SWPPP monitoring, wetland and waterbody crossings, and non-compliance reports.

### **4.2 Monthly Report**

The EM will be required to prepare a monthly status update summarizing activities that occurred on the Project site including detailed descriptions of any non-compliance issues that may have occurred. The information compiled in the daily reports will be used to compile this summary.

### **4.3 Post Construction Report**

Upon completion of the construction and restoration of the Project site, the EM will be required to complete a Post Construction Report. The report will summarize the restoration measures implemented on the Project site including the documentation of any permanent storm water controls, restoration activities in agricultural land, restoration within wetlands and stream crossings, and documentation of any reseeding or planting that is undertaken for restoration. The daily and monthly summaries will be used to compile this report. This report will be provided to all interested agencies upon request, including the Towns, NYSDEC, USACE, and NYSDAM.

## **5.0 Permit Conditions**

This section will summarize the applicable permit conditions attached to state and federal permits obtained by Ripley – Westfield Wind LLC for construction of the Project. The conditions listed here are those specifically pertaining to environmental issues that may be encountered during construction. The complete permits, with all conditions, will be attached to this document as appendices.

### **5.1 USACE Permit Conditions**

# **APPENDICES**

(To come when Environmental Monitoring Plan is finalized.)